PTO 05-2089

CY=JA DATE=19890510 KIND=A
PN=01-117546

FACSIMILE COMMUNICATION SYSTEM
[Fakushimiri tsushinhoshiki]

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UNITED STATES PATENT AND TRADEMARK OFFICE
Washington, D.C. February 2005

Translated by: FLS, Inc.

PUBLICATION COUNTRY	(19):	JP
DOCUMENT KIND	(12):	A
	(13):	PUBLISHED UNEXAMINED PATENT APPLICATION (Kokai)
PUBLICATION DATE	(43):	19890510 [WITHOUT GRANT]
PUBLICATION DATE	(45):	19890510 [WITH GRANT]
APPLICATION NUMBER	(21):	62-275265
APPLICATION DATE	(22):	19871030
PRIORITY DATE	(32):	
ADDITION TO	(61):	
INTERNATIONAL CLASSIFICATION	(51):	H04L 11/20; H04N 1/00
DOMESTIC CLASSIFICATION	(52):	
PRIORITY COUNTRY	(33):	
PRIORITY NUMBER	(31):	
PRIORITY DATE	(32):	
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TITLE	(54):	FACSIMILE COMMUNICATION SYSTEM
FOREIGN TITLE	[54A]:	Fakushimiri tsushinhoshiki

Specification

1. Name of this invention

FACSIMILE COMMUNICATION SYSTEM

2. Claim(s)

[1] Facsimile communication system utilizing a public communication network connecting a first host computer containing an external memory device and a second host computer containing an external memory device and connected to a facsimile device through a telephone network; wherein said facsimile communication system includes a transfer means for transferring facsimile data to a packet network through which said first host computer and second host computer are connected, and said second host computer is equipped with a facsimile control means comprising a reception means which receives said facsimile data transmitted from said first host computer and temporarily stores this data to its own external memory device, and a facsimile transmission means which transmits said stored facsimile data to said facsimile device through a telephone network.

3. Detailed Explanation of this Invention

[Industrial Field]

This invention relates to facsimile communication. That is, this invention pertains to a facsimile communication method and is particularly associated with a remote facsimile communication method

for communicating between a host computer and remotely located facsimile device.

[Summary of this Invention]

This invention provides a facsimile communication method for exchanging data between a host computer and remotely located facsimile device, which utilizes a packet network for connecting a host computer transmitting a signal and a host computer connected to a facsimile device. Thus, the long distance communication cost is minimized.

[Conventional Technology]

Conventionally, when a host computer communicates with a facsimile device using this type of facsimile communication method, an application program in the host computer containing an external memory device sends a request to a facsimile control program in the same host computer to output the facsimile data stored in the external memory device to the facsimile device, and the facsimile control program, which has received this request, transmits facsimile data stored in the external memory device to a facsimile device specified by the application program through a telephone network.

[Problems to Be Solved by this Invention]

Since the conventional facsimile communication method described above provides communication between a host computer and a facsimile device using a telephone network, a high communication cost is

necessary when the facsimile device is located at a long distance location.

The object of this invention is to provide a communication method, which can reduce the long distance communication cost so as to solve the above-mentioned problem.

[Method to Solve the Problems]

To solve the above-mentioned problem, this invention provides a facsimile communication system utilizing a public communication network connecting a first host computer containing an external memory device and a second host computer containing an external memory device and connected to a facsimile device through a telephone network; wherein said facsimile communication system includes a transfer means for transferring facsimile data to a packet network through which said first host computer and second host computer are connected, and said second host computer is equipped with a facsimile control means comprising a reception means which receives said facsimile data transmitted from said first host computer and temporarily stores this data to its own external memory device, and a facsimile transmission means which transmits said stored facsimile data to said facsimile device through a telephone network.

[Operation]

An application program installed onto a host computer which needs to originate signal transmission sends a transmission request to an application request reception means within the facsimile

request program so as to output facsimile data in the external memory device. Upon reception of the request issued by the application request reception means, based on the transferred request through the packet network, a transfer means transfers the facsimile output request sent from the application program and facsimile data stored in the external memory device to the host computer located near the facsimile device which is the transmission destination of the facsimile data. The reception means of the facsimile control program of the host computer, which has received the transferred facsimile data, receives the facsimile output request sent from the signal origination host computer and the facsimile data stored in the external memory device of the originating host computer, stores the received facsimile data to its own external memory device, and transmits the facsimile data stored to the external memory device to the facsimile device using the facsimile transmission means through a telephone network. Therefore, by transferring data between host computers through a packet communication network as described above, the long distance communication cost can be reduced.

[Operational Example]

The following will explain the operational example of this invention by referring to the Figures.

Figure 1 is a diagram showing the configuration of an operational example of this invention. In this example, through the packet network 7, a first host computer 1 having an external memory

device **2** is connected to a second host computer, which contains an external memory device **9** and is connected to a facsimile device through the telephone network.

The first host computer **1** is equipped with an application program **3** and facsimile request program **4**. The second host computer **8** is equipped with a facsimile control program **10**. The facsimile request program **4** on the first host computer **1** includes an application program request reception means and transfer means **6**. The facsimile control program **10** on the second host computer **8** includes a reception means **11** and facsimile transmission means **12**.

Figure 2 is a diagram showing the configuration of the transfer means **6** of the host computer explained in the operational example and the relation of application program request reception means **5**, external memory device **2**, and reception means **11**. The application request reception means **5**, reception means **11**, and transfer means **6** having the data I/O relation with the external memory device respectively contain a facsimile output request transfer part **61** and facsimile data transfer part **62**.

Figure 3 is a diagram showing the configuration of the reception means **11** of the host computer explained in the operational example and the relation between the transfer means **6** and the external memory device **9**. The reception means **11** having the data I/O relation with the transfer means **6** and external memory device **9** includes a

facsimile output request part **111** and facsimile data signal reception part **112**.

Figure 4 is a diagram showing the configuration of the facsimile signal transmission means **12** of the host computer explained in the operational example and the relation between the external memory device **9** and facsimile device **14**. The facsimile signal transmission means **12** having the data I/O relation with the external memory device **9** and facsimile device **14** includes a communication preparation part **121** and facsimile data signal transmission part **122**.

Hereafter, the facsimile communication method of this example configured as described above is explained. First, the application program **3** transmits a request to the facsimile request program **4** installed in the first host computer to output the facsimile data **15** stored in the external memory device **2** to the facsimile device **14**.

The application request reception means **5** of the facsimile request program **4** receives the facsimile output request from the application program **3** and transfers the request to the transfer means **6**. The facsimile output request transfer part **61** of the transfer means **6** transfers a facsimile output request to the facsimile device **14** which is the output destination of the facsimile data **15** and to the second host computer **8** located at the close distance through the packet network **7**, while the facsimile data transfer part **62** transfers the facsimile data **15** stored in the external memory device **2** to the second host computer **8** through the packet network **7**.

The facsimile control program **10** in the second host computer **8** receives the facsimile output request transmitted from the first host computer using the facsimile output request signal reception part **111** of the reception means **11**, while the facsimile data signal reception part **112** receives the facsimile data **15** transmitted from the first host computer **1** and stores the data to the external memory device **9**.

Next, the communication preparation part **121** of the facsimile transmission means **12** sets the second host computer **8** and facsimile device **14** to communication mode based on the output request received by the facsimile output request reception part **111** of the reception means **11**. Then, the facsimile data transmission part **122** transmits the facsimile data stored in the external memory device **9** to the facsimile device **14** through the telephone network **13**.

[Effect of this Invention]

As explained above, this invention connects a signal origination host computer and a host computer located at a close distance to a remotely positioned facsimile device through a packet network costing much less than the telephone network so as to reduce the distance of facsimile data communication utilizing the expensive telephone network. Thus, facsimile data communication cost can be reduced.

4. Simple Explanation of the Figures

Figure 1 is a diagram showing the configuration of an Operational example of this invention.

Figure 2 is a diagram showing the configuration of the transfer means of the host computer explained in the operational example and the relation of application program request reception means, external memory device, and reception means.

Figure 3 is a diagram showing the configuration of the reception means of the host computer explained in the Operational example and the relation between the transfer means and the external memory device.

Figure 4 is a diagram showing the configuration of the facsimile signal transmission means of the host computer explained in the operational example and the relation between the external memory device and facsimile device.

1...First host computer; 2...External memory device; 3...Application program; 4...Facsimile request program; 5...Application request reception means; 6...Transfer means; 7...Packet network; 8...Second host computer; 9...External memo0ry device; 10...Facsimile control program; 11...Reception means; 12...Facsimile transmission means; 13...Telephone network; 14...Facsimile device; 15...Facsimile data; 61...Facsimile output request transfer part; 62...Facsimile data transfer part; 111...Facsimile output request signal reception part; 112...Facsimile data signal reception part; 121...Communication preparation part; 122...Facsimile data signal transmission part

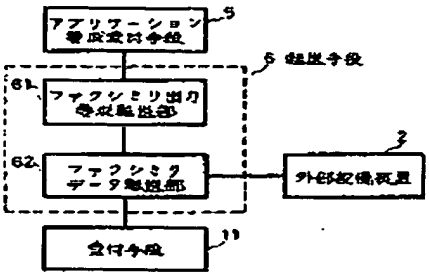

Figure 2

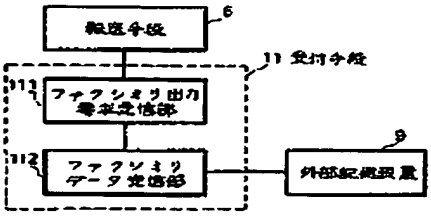

Figure 3

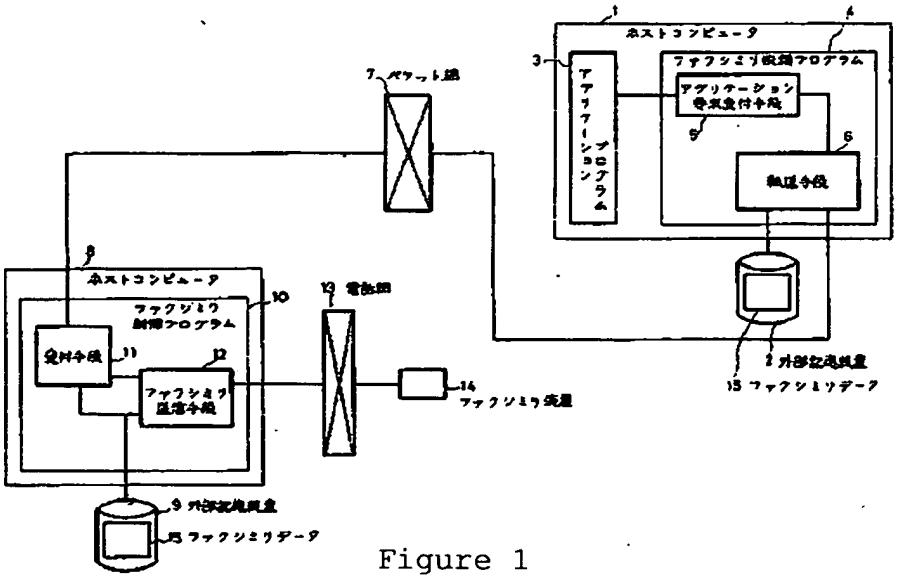

Figure 1

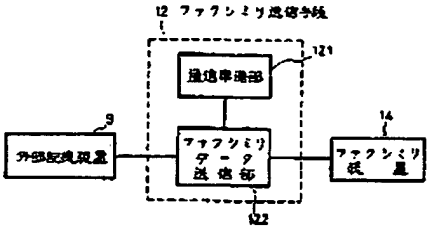

Figure 4